

**Amendments to the Claims:**

The following listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-7 are canceled.

8. (New) A method for producing a single crystal by Czochralski method with pulling the single crystal from raw material melt in a crucible heated and melted by a heater, wherein the single crystal occupied by N region over an entire plane in a radial direction is produced with setting an inside diameter of the heater to be 1.26 or more times longer than an inside diameter of the crucible.

9. (New) The method for producing a single crystal according to Claim 8, wherein the single crystal is produced with setting an inside diameter of the heater to be 1.5 or less times longer than an inside diameter of the crucible.

10. (New) The method for producing a single crystal according to Claim 8, wherein the single crystal is produced so as to contain oxygen at the concentration of 14 ppma or less.

11. (New) The method for producing a single crystal according to Claim 9, wherein the single crystal is produced so as to contain oxygen at the concentration of 14 ppma or less.

12. (New) The method for producing a single crystal according to Claim 8, wherein the single crystal is pulled without applying a magnetic field to the raw material melt.

13. (New) The method for producing a single crystal according to Claim 9, wherein the single crystal is pulled without applying a magnetic field to the raw material melt.

14. (New) The method for producing a single crystal according to Claim 10, wherein the single crystal is pulled without applying a magnetic field to the raw material melt.

15. (New) The method for producing a single crystal according to Claim 11, wherein the single crystal is pulled without applying a magnetic field to the raw material melt.

16. (New) The method for producing a single crystal according to Claim 8, wherein a silicon single crystal is pulled as the single crystal.

17. (New) The method for producing a single crystal according to Claim 9, wherein a silicon single crystal is pulled as the single crystal.

18. (New) The method for producing a single crystal according to Claim 10, wherein a silicon single crystal is pulled as the single crystal.

19. (New) The method for producing a single crystal according to Claim 11, wherein a silicon single crystal is pulled as the single crystal.

20. (New) The method for producing a single crystal according to Claim 12, wherein a silicon single crystal is pulled as the single crystal.

21. (New) The method for producing a single crystal according to Claim 13, wherein a silicon single crystal is pulled as the single crystal.

22. (New) The method for producing a single crystal according to Claim 14, wherein a silicon single crystal is pulled as the single crystal.

23. (New) The method for producing a single crystal according to Claim 15, wherein a silicon single crystal is pulled as the single crystal.

24. (New) An apparatus for producing a single crystal by Czochralski method, at least, comprising a crucible for containing raw material melt, a heater surrounding the crucible so as to heat and melt the raw material melt in the crucible, and a pulling means for

pulling the single crystal from the raw material melt in the crucible, wherein an inside diameter of the heater is 1.26 or more times longer than an inside diameter of the crucible.

25. (New) The apparatus for producing a single crystal according to Claim 24, wherein an inside diameter of the heater is 1.5 or less times longer than an inside diameter of the crucible.